## INTERNATIONAL SEARCH REPORT

International application No. PCT/JP2004/013889

	·	PCT/JP2	004/013889
A. CLASSIFIC Int.Cl <sup>7</sup>	CATION OF SUBJECT MATTER F15B1/10		
According to Inte	ernational Patent Classification (IPC) or to both national	al classification and IPC	·
B. FIELDS SE			
Minimum docum Int.Cl <sup>7</sup>	nentation searched (classification system followed by cl F15B1/00-1/10, F16F9/02, F16F	assificati on symbols) 32/00 —2/04	
	searched other than minimum documentation to the exte	at that as an documents are included in the	fields searched
Jitsuyo Kokai Ji	Shinan Koho 1922-1996 Ji itsuyo Shinan Koho 1971-2004 To	tsuyo Shinan Toroku Koho oroku Jitsuyo Shinan Koho	1996–2004 1994–2004
Electronic data b	pase consulted during the international search (name of	data base and, where practicable, search te	rms used)
C. DOCUMEN	ITS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where ap	propriate, of the relevant passages	Relevant to claim No.
A	JP 2002-276604 A (NOK Corp.) 25 September, 2002 (25.09.02) Full text; Fig. 8 & US 2004-0056530 A & EP		1-4
P,A	<pre>JP 2003-336601 A (NOK Corp.) 28 November, 2003 (28.11.03), Full text; Fig. 1 (Family: none)</pre>		1-4
	·		<u> </u>
	ocuments are listed in the continuation of Box C.	See patent family annex.	emetional filing date or existing
<ul> <li>"A" document defining the general state of the art which is not considered to be of particular relevance</li> <li>"E" earlier application or patent but published on or after the international filing date</li> <li>"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)</li> <li>"O" document referring to an oral disclosure, use, exhibition or other means document published prior to the international filing date but later than the priority date claimed</li> </ul>		"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention  "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone  "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art  "&" document member of the same patent family	
	al completion of the international search ober, 2004 (25.10.04)	Date of mailing of the international sear 16 November, 2004	
Name and mailing	ng address of the ISA/ se Patent Office	Authorized officer	
Facsimile No.	10 (second sheet) (January 2004)	Telephone:No.	· · · ·

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A CD-ROM of the specification and drawings annexed to the request of Japanese Utility Model Application No. 9137/1993(Laid-open No. 69473/1994) (Kawasaki Heavy Industries, Ltd.), 30 September, 1994 (30.09.94), Full text; Fig. 1 (Family: none)  A JP 2002-308319 A (Seiji KITAMURA), 23 October, 2002 (23.10.02), Full text; Fig. 4 (Family: none)	Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
23 October, 2002 (23.10.02), Full text; Fig. 4	А	annexed to the request of Japanese Utility Model Application No. 9137/1993(Laid-open No. 69473/1994) (Kawasaki Heavy Industries, Ltd.), 30 September, 1994 (30.09.94), Full text; Fig. 1	1-4
	A	23 October, 2002 (23.10.02), Full text; Fig. 4	1-4
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